

Welcome to WinPond Training



Download Site for WinPond

- NRCS Homepage

- Topics

- Technical Resources

- Related Links

- Technical Resources/Science and Technology Conservation Tools Software

- OR

- <http://www.nrcs.usda.gov/wps/portal/nrcs/detailfull/national/technical/?cid=stelprdb1042198>

User's Guide for WinPond

The Missouri NRCS web site contains a link to the WinPond 2007 User Guide and a FAQ page:

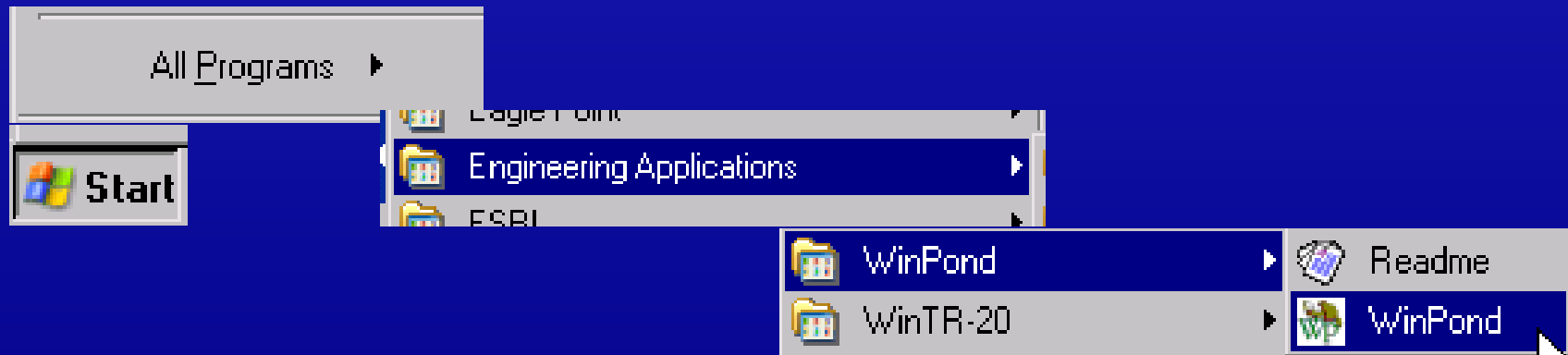
- Missouri NRCS Homepage
 - Technical Resources
 - Engineering
 - Engineering Software
 - WinPond Design Program

OR

<http://directives.sc.egov.usda.gov/21845.wba>

Starting WinPond

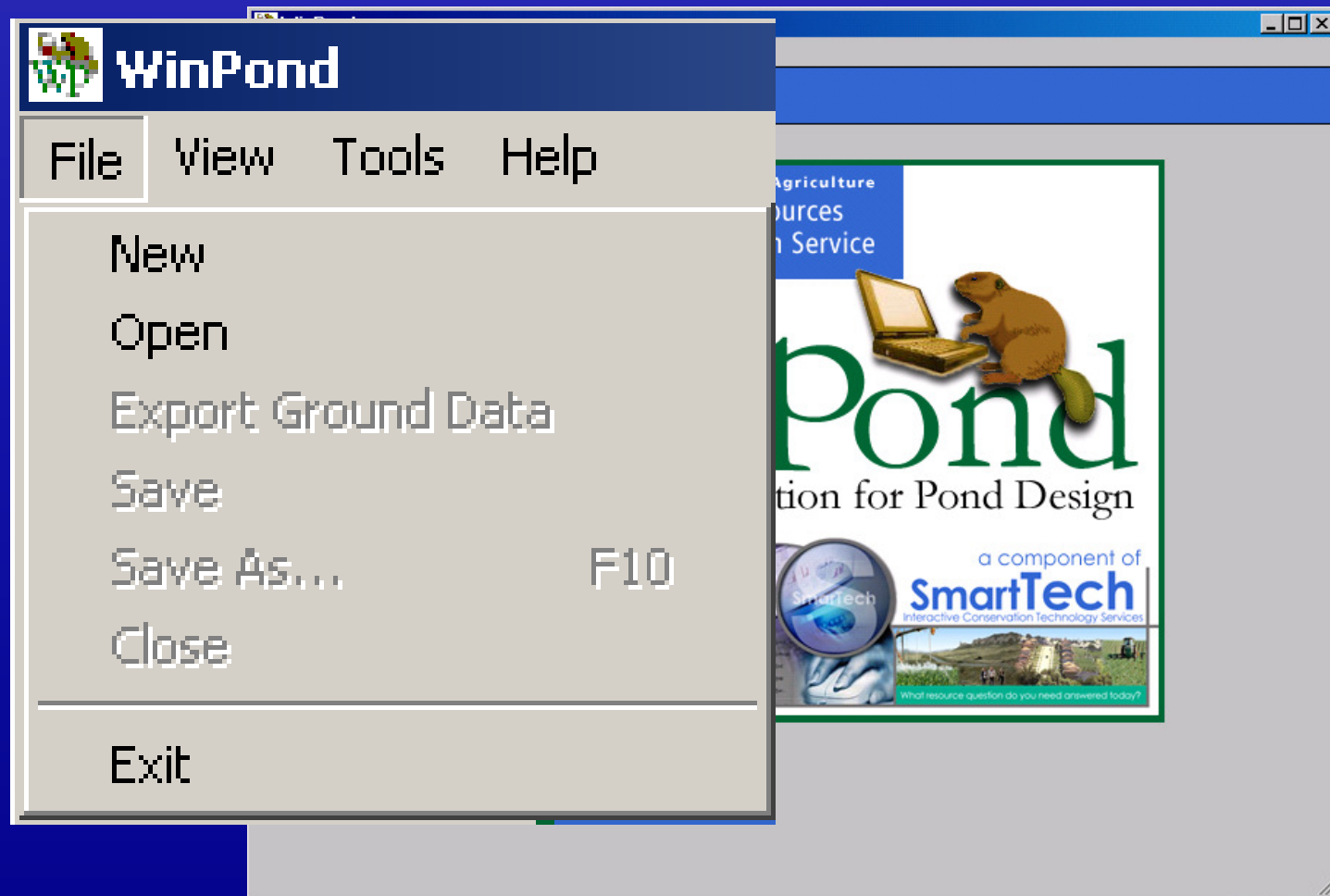
Start -> All Programs ->
Engineering Applications ->
WinPond -> WinPond



Main Program Window



“File”



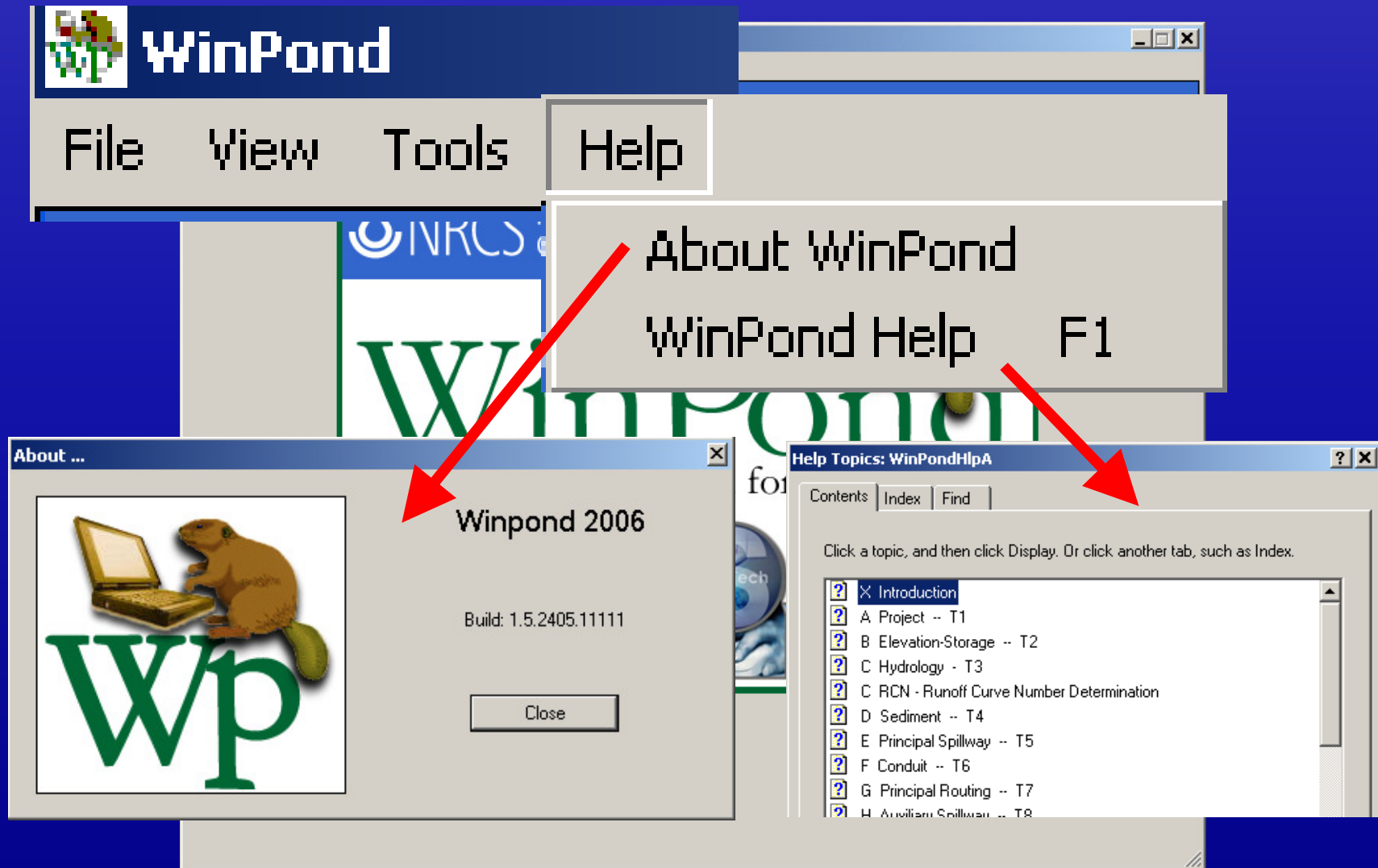
“File”

- Project data is stored in 1 single file instead of separate ones.
- The single file has a PRJ extension (e.g., Project123.prj)

“Tools” and “Options”



"Help"



Tools -> Options

Options

General | Auxiliary Spillway | Ground | Earthwork | Drawdown | Design

Data Path: C:\Customer_Files_Toolkit ...

☒ Show File Save Dialog when F10 is Pressed.

Footer For Cover Page:

Office Name
Address1
Address2
City

OK Defaults Cancel

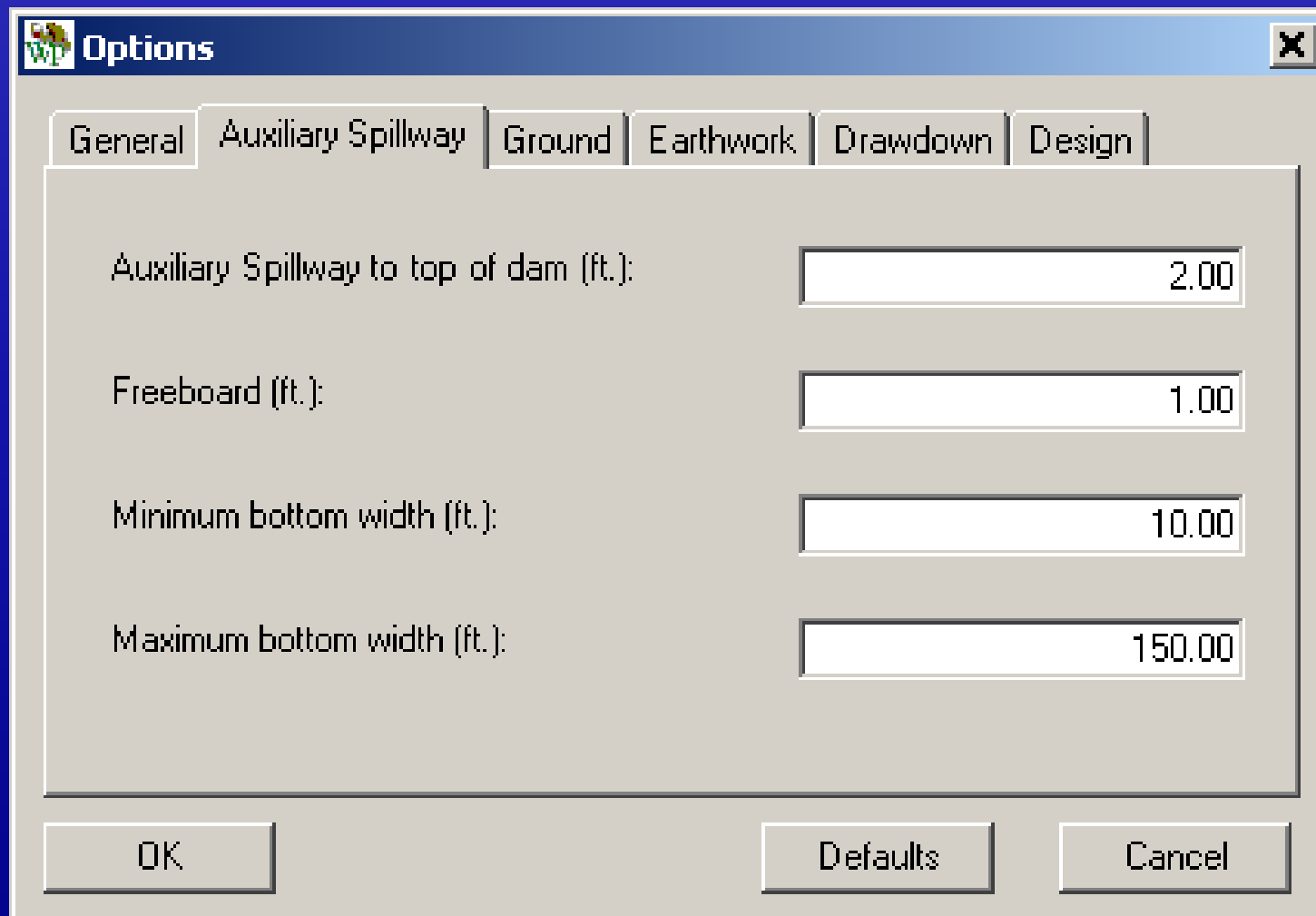
Tools -> Options

The settings entered here are stored in a file named *WinPond.conf* in the folder

Example –

c:\Documents and Settings
 \user.name\Local Settings
 \Application Data\USDA, NRCS\WinPond\

Tools -> Options (Aux. Spillway)

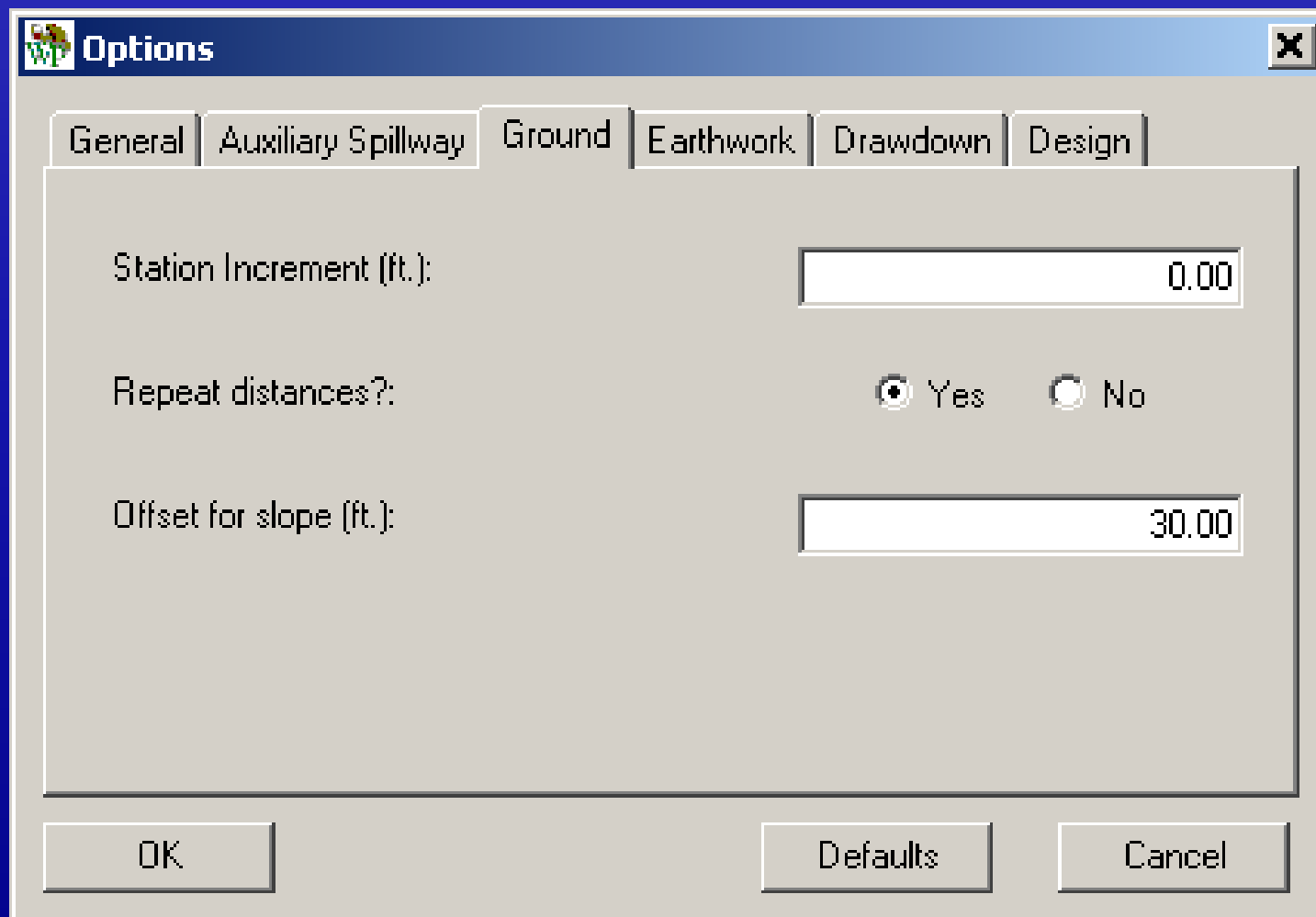


The image shows a software dialog box titled "Options" with a close button (X) in the top right corner. The dialog has six tabs: "General", "Auxiliary Spillway", "Ground", "Earthwork", "Drawdown", and "Design". The "Auxiliary Spillway" tab is currently selected. Inside this tab, there are four input fields, each with a label and a numerical value:

Parameter	Value
Auxiliary Spillway to top of dam (ft.):	2.00
Freeboard (ft.):	1.00
Minimum bottom width (ft.):	10.00
Maximum bottom width (ft.):	150.00

At the bottom of the dialog, there are three buttons: "OK", "Defaults", and "Cancel".

Tools -> Options (Ground)

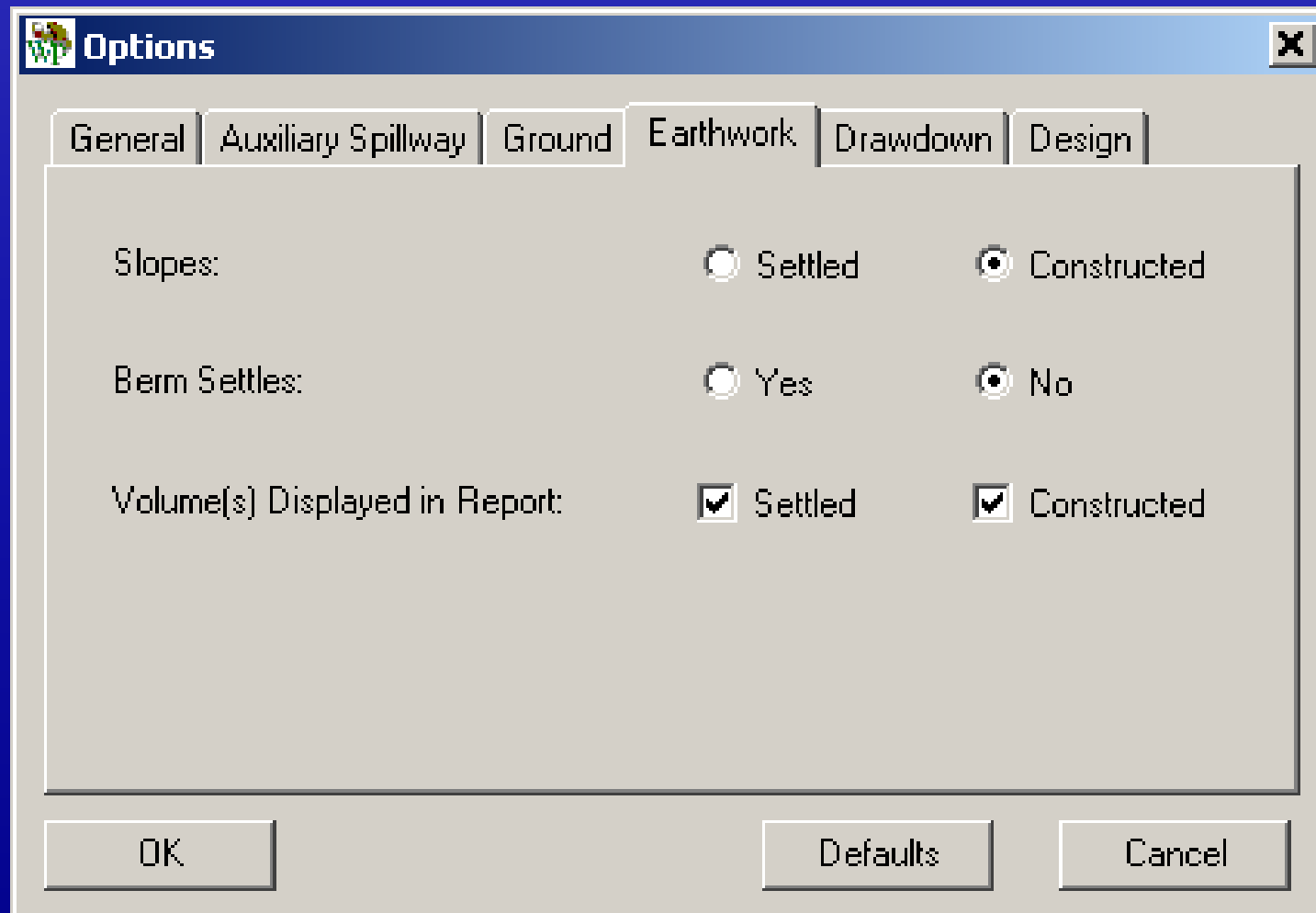


The image shows a software dialog box titled "Options" with a close button (X) in the top right corner. The dialog has six tabs: "General", "Auxiliary Spillway", "Ground", "Earthwork", "Drawdown", and "Design". The "Ground" tab is currently selected. Inside the "Ground" tab, there are three settings:

- "Station Increment (ft.):" with a text input field containing "0.00".
- "Repeat distances?:" with two radio buttons: "Yes" (which is selected) and "No".
- "Offset for slope (ft.):" with a text input field containing "30.00".

At the bottom of the dialog, there are three buttons: "OK", "Defaults", and "Cancel".

Tools -> Options (Earthwork)

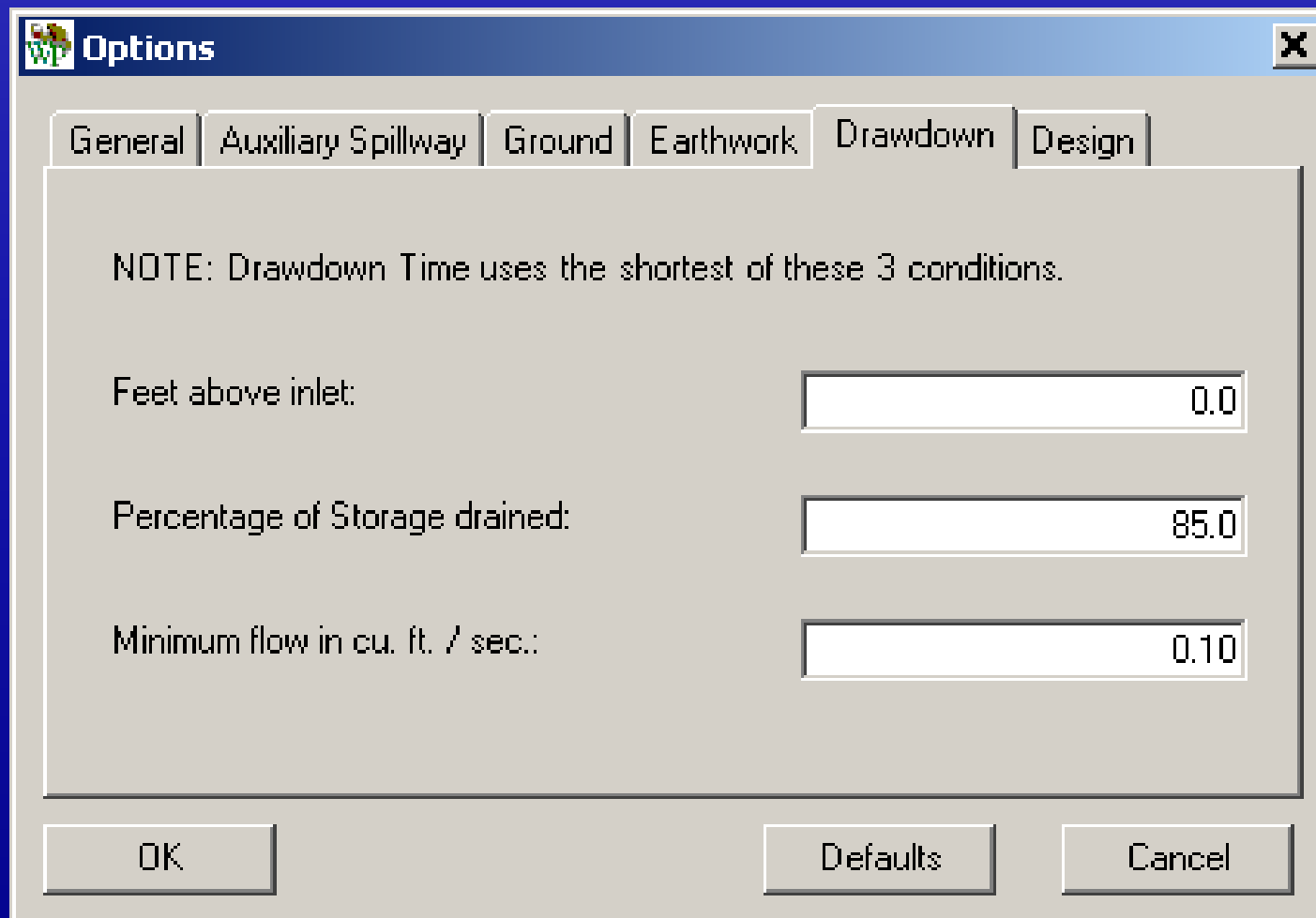


The screenshot shows a software dialog box titled "Options" with a close button (X) in the top right corner. The dialog has six tabs: "General", "Auxiliary Spillway", "Ground", "Earthwork", "Drawdown", and "Design". The "Earthwork" tab is currently selected. Inside the dialog, there are three settings:

- Slopes:** Two radio buttons are present. "Settled" is unselected, and "Constructed" is selected.
- Berm Settles:** Two radio buttons are present. "Yes" is unselected, and "No" is selected.
- Volume(s) Displayed in Report:** Two checkboxes are present. Both "Settled" and "Constructed" are checked.

At the bottom of the dialog, there are three buttons: "OK", "Defaults", and "Cancel".

Tools -> Options (Drawdown)

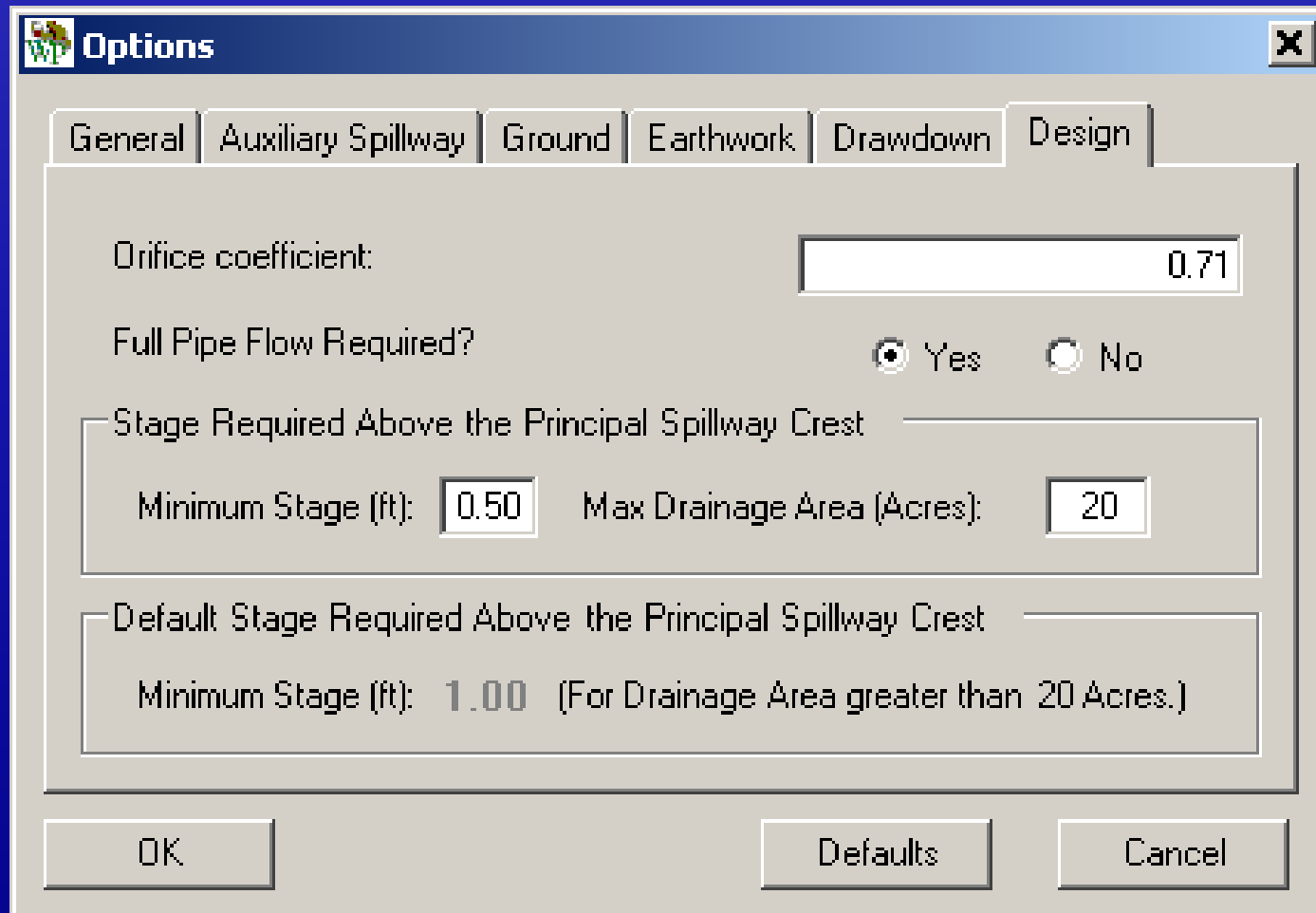


The image shows a software dialog box titled "Options" with a close button (X) in the top right corner. It features six tabs: "General", "Auxiliary Spillway", "Ground", "Earthwork", "Drawdown", and "Design". The "Drawdown" tab is currently selected. Inside the dialog, a note states: "NOTE: Drawdown Time uses the shortest of these 3 conditions." Below the note are three input fields with their respective labels and values:

Label	Value
Feet above inlet:	0.0
Percentage of Storage drained:	85.0
Minimum flow in cu. ft. / sec.:	0.10

At the bottom of the dialog are three buttons: "OK", "Defaults", and "Cancel".

Tools -> Options (Design)



The image shows a screenshot of a software dialog box titled "Options". The dialog has a tabbed interface with the following tabs: "General", "Auxiliary Spillway", "Ground", "Earthwork", "Drawdown", and "Design". The "Design" tab is currently selected. The dialog contains the following settings:

- Orifice coefficient:** A text input field containing the value "0.71".
- Full Pipe Flow Required?** A radio button group with "Yes" selected (indicated by a filled circle) and "No" (indicated by an empty circle).
- Stage Required Above the Principal Spillway Crest:** A group box containing:
 - Minimum Stage (ft):** A text input field containing "0.50".
 - Max Drainage Area (Acres):** A text input field containing "20".
- Default Stage Required Above the Principal Spillway Crest:** A group box containing:
 - Minimum Stage (ft):** A text input field containing "1.00", followed by the text "(For Drainage Area greater than 20 Acres.)".

At the bottom of the dialog are three buttons: "OK", "Defaults", and "Cancel".

Exercise

Load WinPond and
enter your own option settings.

WinPond window

Tab navigation

Menu

Screen Tabs

Input Data

Info Line

WinPond - Pipe Replacement.prj : Pipe Replacement

File View Tools Help

United States Department of Agriculture
NRCS Natural Resources Conservation Service

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Design Check Ground Profile/Cross Section Embankment Cross Section Ground/Embankment Intersection Reports

Project Elevation-Storage Hydrology Sediment Principal Spillway Conduit Principal Routing Aux Spillway Aux Routing

Auxiliary Elevation:	98.70	Elevations:	
Actual Bottom width (feet):	10.00	Top of fill:	100.7
Actual flow depth (Hp) (feet):	0.96	Channel (downstream toe):	77.6
Water elevation in auxiliary:	99.66	Overall height (feet):	23.1
Flow in auxiliary (cfs):	25.84		
Drawdown time (days-hours):	0-17.5	Storage (acre feet):	
		AS to Maximum water:	1.20
Minimum exit slope (%):	2.3	Temporary (PS to AS):	1.15
Maximum exit slope (%):	3.6	Total at principal spillway:	5.45
PS outflow at water elev (cfs):	N/A (Pipe dia. < 10 in.)	Total at auxiliary elevation:	6.60
Full pipe flow elevation (ft):	99.10	Total at water elevation:	7.80
		Total at top of fill:	9.23

JOB APPROVAL CLASS = II

Inlet Elevation: 97.7 Conduit Diameter: 6.00 Auxiliary Elevation: 98.7 Top Of Dam: 100.7

Creating a “default” template

There are some data inputs (e.g., state, county, and designed by) that most user’s would like to come up as defaults whenever they begin a new project.

This can be accomplished by creating a “default” project.

Creating a “default” template

The first step is to select
“File -> New”



Creating a “default” template

The next step is to go through the screen tabs entering data for those fields that are fairly constant from design to design.

Examples?

State, county, designer;

Rainfall frequencies for principal and aux. spillways;

Front slope, back slope, top width;

Creating a "default" template

Elevation-storage data is normally data that will change from design to design. Data on this screen is therefore not a good candidate for a default template. To leave it blank and move to the next tab you will need to click on I am making a template project.

The screenshot shows the WinPond software window. The title bar reads "WinPond". The menu bar includes "File", "View", "Tools", and "Help". Below the menu bar is a blue header with the "NRCS" logo and the text "United States Department of Agriculture Natural Resources Conservation Service". To the right of the header are "Previous" and "Next" buttons. Below the header is a row of tabs: "Design Check", "Ground Profile/Cross Section", "Embankment Cross Section", "Ground/Embankment Intersection", and "Reports". Below this is another row of tabs: "Project", "Elevation-Storage", "Hydrology", "Sediment", "Principal Spillway", "Conduit", "Principal Routing", "Aux Spillway", and "Aux Routing". The "Elevation-Storage" tab is selected. The main area of the window contains the text "Select the desired elevation storage input method:" followed by two radio buttons: "Acres" (selected) and "Square Inches". Below this is a text input field labeled "Elevation Storage Data (in Acres)". At the bottom of the window, there are several buttons: "Delete" (twice), "Clear All", "View", and a button labeled "I am making a template project." which is circled in red. A red arrow points from the text in the overlay to this button.

Creating a “default” template

Once you have entered all the data you want in your “default” project template, select “File -> Save As...” and save the project to *default.prj* in the default data path entered under Tools -> Options

(for example,

C:\Customer_Files_Toolkit)

Exercise

Create a “default” template.

Start a new project

Simply select
"File -> New"



Data from your default project
should then be loaded.

Tips on entering data

Before you get started, keep these in mind:

- . ENTER key – preferred way to move between fields, rather than clicking with the mouse.
- . TAB key – can also use to move between fields but with no scrolling
- . Shift + TAB - moves cursor to the previous field
- . Delete or Backspace - use to delete characters in the input field

Project tab

WinPond - SAMPLE1.PRJ : Sample problem

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Design Check Ground Profile/Cross Section Embankment Cross Section Ground/Embankment Intersection Reports

Project Elevation-Storage Hydrology Sediment Principal Spillway Conduit Principal Routing Aux Spillway Aux Routing

Project: Sample problem

State: Missouri

County: Boone

Landowner: John Q. Farmer

Township: 47N

Range: 12W

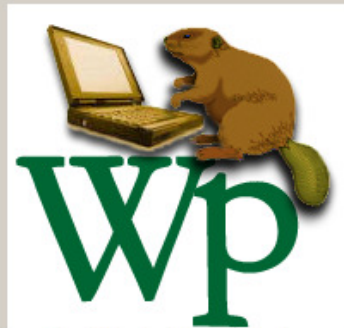
Section: 25

Tract:

Field: 2

Designed By: J.Q. Engineer

Date: 11/12/1992



[Check Design & Routing Settings](#)

Notes/Description:

Elevation-Storage tab

WinPond - SAMPLE1.PRJ : Sample problem

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Project **Elevation-Storage** Hydrology Sediment Principal Spillway Conduit Principal Routing Aux Spillway Aux Routing

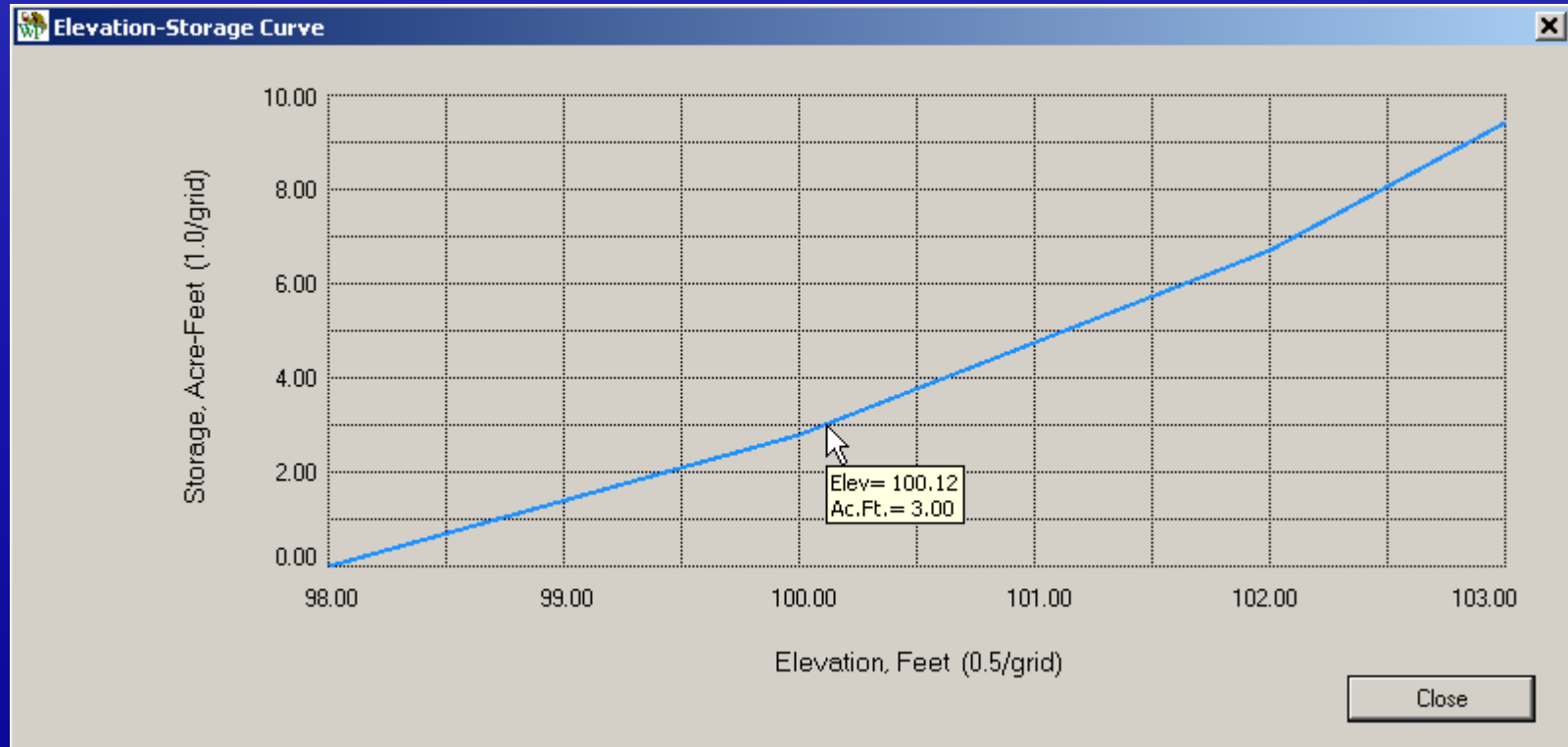
Select the desired elevation storage input method: ☒ Acres ☐ Square Inches

Elevation-Storage Data (in Acres)

	Elevation (feet)	Pool Area (acres)	Int. Storage (ac.ft.)	Accum. Storage (ac.ft.)
Delete	98.0	1.2		
Delete	100.0	1.6	2.8	2.8
Delete	102.0	2.3	3.9	6.7
Delete	103.0	3.1	2.7	9.4
Delete				
Delete				
Delete				
Delete				
Delete				

[Clear All](#) [View](#) [I am making a template project.](#)

Elevation-Storage Curve



Hydrology tab

WinPond - SAMPLE1.PRJ : Sample problem

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Project Elevation-Storage **Hydrology** Sediment Principal Spillway Conduit Principal Routing Aux Spillway Aux Routing

Rainfall distribution type: II

Drainage area (acres): 47.00

Runoff Curve Number (RCN): 5 ...

Watershed slope (%): 6.00

Flow Length (feet): 2950.00

Time of concentration: 0.60 hours (35.8 minutes)

NOTE: Values based on EFH, chapter 2.

Principal Spillway Auxiliary Spillway

Frequency (years): 5 50

Rainfall (inches): 4.60 * 6.80 *

Runoff (inches): 2.13 * 3.97 *

*USER-DEFINED VALUE

Freq. (yrs)	24-Hr Rain (in)	Runoff (in)
1	3	1.0
2	3.5	1.3
5	4.5	2.1
10	5.2	2.6
25	5.9	3.2
50	6.6	3.8
100	7.3	4.4

Runoff Curve Number Determination

Runoff Curve Number Determination

Acres (and curve numbers) for Hydrologic Soil Group

Cover Description		A	B	C	D	
CULTIVATED AGRICULTURAL LANDS						
Fallow	Bare soil	---	77	86	91	94
	Crop residue (CR)	poor	76	85	90	93
	Crop residue (CR)	good	74	83	88	90
Row crops	Straight row (SR)	poor	72	81	88	91
	Straight row (SR)	good	67	78	85	89

☒ Acres ☐ Percentage

Clear All Find Next Save Cancel

Accumulated Total: 47.0 Acres Weighted Curve Number: 76

Sediment tab

The screenshot shows the WinPond software interface for a sample problem. The title bar reads "WinPond - SAMPLE1.PRJ : Sample problem". The menu bar includes "File", "View", "Tools", and "Help". The header area features the "United States Department of Agriculture" and "NRCS Natural Resources Conservation Service" logos, along with "Previous" and "Next" navigation buttons. A series of tabs are visible: "Design Check", "Ground Profile/Cross Section", "Embankment Cross Section", "Ground/Embankment Intersection", "Reports", "Project", "Elevation-Storage", "Hydrology", "Sediment" (which is the active tab), "Principal Spillway", "Conduit", "Principal Routing", "Aux Spillway", and "Aux Routing". The main content area is titled "Sediment Storage Required (acre feet)". It contains two input fields: "Above inlet:" with a value of "0.00" and "Below inlet:" with a value of "0.00". Two red callout boxes provide additional context: one points to the "Above inlet:" field stating it is "Used to determine the minimum height for the inlet elevation", and the other points to the "Below inlet:" field stating it "Reduces the amount of storage available when the floodrouting is done".

WinPond - SAMPLE1.PRJ : Sample problem

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Project Elevation-Storage Hydrology **Sediment** Principal Spillway Conduit Principal Routing Aux Spillway Aux Routing

Sediment Storage Required (acre feet)

Above inlet: 0.00

Below inlet: 0.00

Used to determine the minimum height for the inlet elevation

Reduces the amount of storage available when the floodrouting is done

Principal Spillway tab

WinPond - SAMPLE1.PRJ : Sample problem

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Project Elevation-Storage Hydrology Sediment **Principal Spillway** Conduit Principal Routing Aux Spillway Aux Routing

Inlet type: CANOPY

Settlement (%): 0 (F4 to toggle)

Top width (feet): 12.00

Front slope (h:1): 3.00

Back slope (h:1): 2.00

Berm Elevation:

Berm Width (feet):

Inlet Elevation: 98.00

Berm Elevation:

Berm Width (feet):

Actual length, elbow to outlet (feet):

Tailwater Elevation:

Outlet Elevation: 81.00

Elbow Elevation:

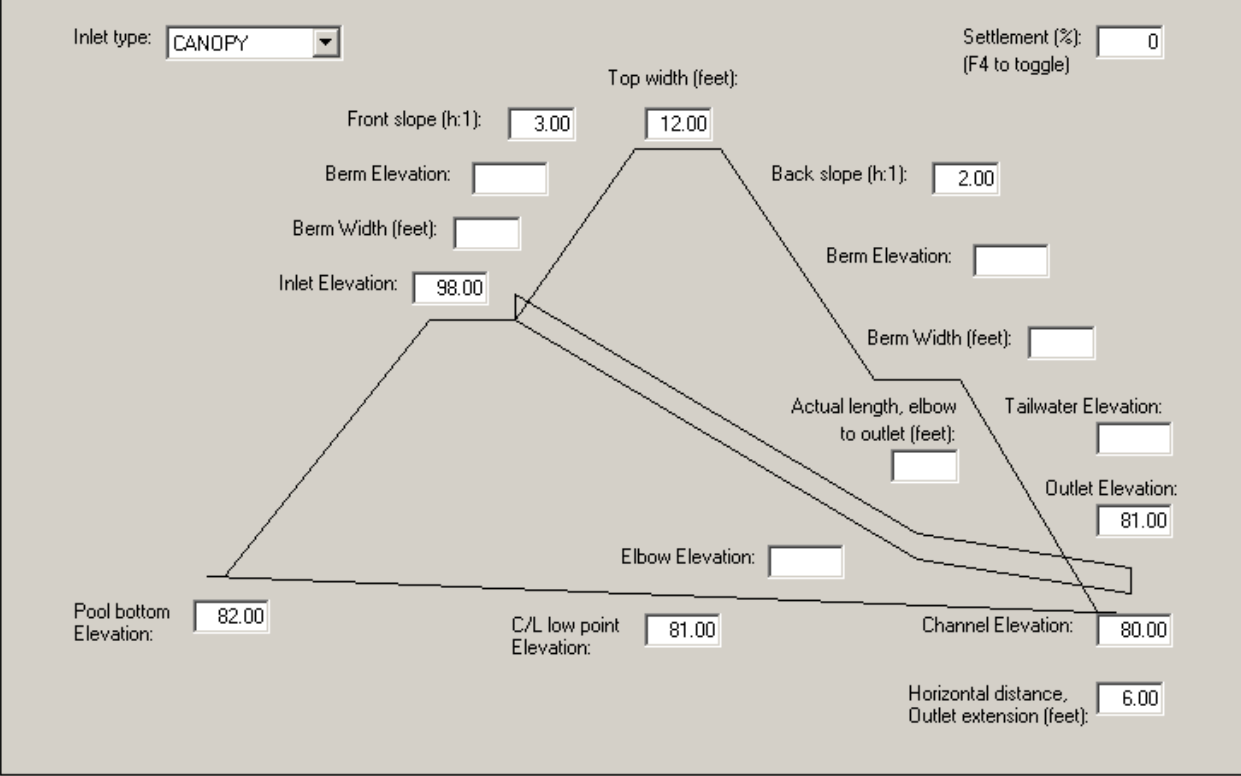
Channel Elevation: 80.00

Horizontal distance, Outlet extension (feet): 6.00

Pool bottom Elevation: 82.00

C/L low point Elevation: 81.00

Inlet Elevation: 98.0



Conduit tab

WinPond - SAMPLE1.PRJ : Sample problem

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Design Check Ground Profile/Cross Section Embankment Cross Section Ground/Embankment Intersection Reports

Project Elevation-Storage Hydrology Sediment Principal Spillway **Conduit** Principal Routing Aux Spillway Aux Routing

Conduit:

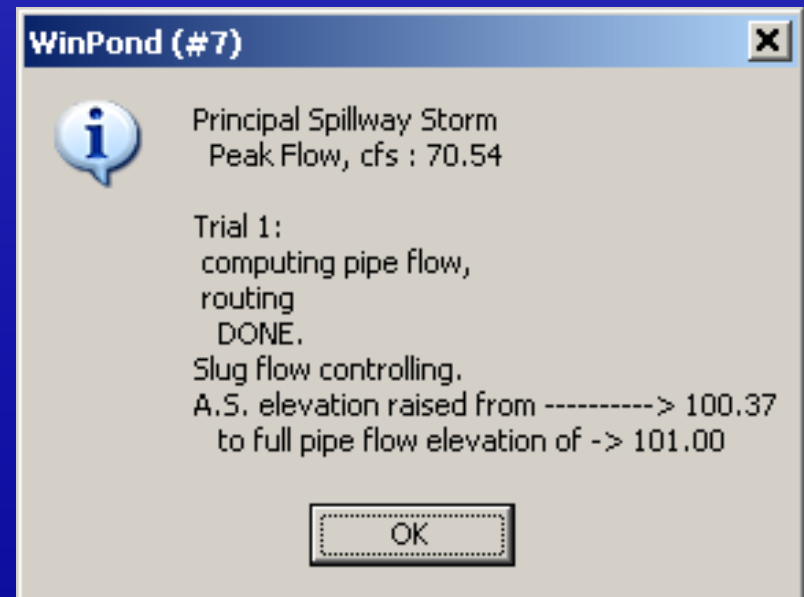
	Trial 1	Trial 2	Trial 3
Type:	SSP - Smooth Steel Pi		
Diameter (inches):	12		
Height (inches):			
Width (inches):			
Manning's n:	0.013		
Inlet extension (feet)	2.0		
Horizontal distance:			
Length (linear feet):	85		
Entrance Coefficient, Ke:	1.000		

[Delete](#)

Inlet Elevation: 98.0

Floodrouting

When done with the
Conduit tab and
you press the
Principal Routing tab,
the floodrouting for the
principal spillway occurs.
An alert window will
appear if there are any
problems.



Principal Routing tab

WinPond - SAMPLE1.PRJ : Sample problem

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Project Elevation-Storage Hydrology Sediment Principal Spillway Conduit **Principal Routing** Aux Spillway Aux Routing

	Trial 1	Trial 2	Trial 3
Conduit:			
Type:	SSP		
Diameter (inches):	12.00		
Height (inches):			
Width (inches):			
Auxiliary Elevation:	101.0		
Minimum top of fill elevation:	103.0		
Storage (acre feet):			
Temporary:	4.58		
Total at auxiliary:	14.18		
Total at minimum top of fill:	19.00		
Effective height (feet):	20.0		
Height x storage:	284		
Drawdown time (days-hours):	0-18.3		
Peak outflow (cfs):	12.73		
Trial to use for routing auxiliary:	1		

^ - Auxiliary spillway raised by user.

[View Routing Messages](#)

Inlet Elevation: 98.0 Conduit Diameter: 12.00 Auxiliary Elevation: 101.0 Top Of Dam: 103.0

The auxiliary elevation can be changed, but only to a larger value.

Aux Spillway tab

WinPond - SAMPLE1.PRJ : Sample problem

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Design Check Ground Profile/Cross Section Embankment Cross Section Ground/Embankment Intersection Reports

Project Elevation-Storage Hydrology Sediment Principal Spillway Conduit Principal Routing **Aux Spillway** Aux Routing

Method: ☐ Calculated ☒ Qe values from ASFILE ☐ User defined stage-discharge ☐ No Auxiliary spillway

Auxiliary Elevation: 100.60

Exit Channel:

Retardance: E

Permissible Velocity (fps): 6.00

☐ Desired bottom width (feet): 14

☒ Desired flow depth (Hp) (feet): 1

Retardance: E

Level section length (feet): 25

Side slope ratio: 3.00 :1

Inlet Elevation: 98.0 Conduit Diameter: 12.00 Auxiliary Elevation: 100.6 Top Of Dam: 102.6

If you want to define flow depth instead of bottom width, check this option.

Aux Routing tab

WinPond - SAMPLE1.PRJ : Sample problem

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Design Check Ground Profile/Cross Section Embankment Cross Section Ground/Embankment Intersection Reports

Project Elevation-Storage Hydrology Sediment Principal Spillway Conduit Principal Routing Aux Spillway **Aux Routing**

Auxiliary Elevation:	101.00	Elevations:	
Actual Bottom width (feet):	14.00	Top of fill:	<input type="text" value="103.5"/>
Actual flow depth (Hp) (feet):	0.98	Channel (downstream toe):	62.0
Water elevation in auxiliary:	101.98	Overall height (feet):	41.5
Flow in auxiliary (cfs):	35.43		
Drawdown time (days-hours):	0.10.7	Storage (acre feet):	
		Water:	2.08
Minimum exit elevation:		AS):	4.58
Maximum exit elevation:		spillway:	9.60
PS outflow elevation:			14.18
Full pipe flow elevation (ft):	99.60	Total at water elevation:	16.26
		Total at top of fill:	20.05

The top of fill elevation can be changed, but only to a larger value.

JOB APPROVAL CLASS = IV ^ - Top of Dam Raised by User **INVENTORY SIZE DAM**

Inlet Elevation: 98.0 Conduit Diameter: 12.00 Auxiliary Elevation: 101.0 Top Of Dam: 103.5

Design Check tab

WinPond - SAMPLE1.PRJ : Sample problem

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Design Check Ground Profile/Cross Section Embankment Cross Section Ground/Embankment Intersection Reports

Project Elevation-Storage Hydrology Sediment Principal Spillway Conduit Principal Routing Aux Spillway Aux Routing

Pipe length used in floodrouting (linear feet): 85

Recalculated pipe length based on final top of fill elevation (linear feet): 84

Click the "Use New Pipe Length" button to return to the Principal Routing tab and run through the design with the new pipe length.

Use New Pipe Length

Inlet Elevation: 98.0 Conduit Diameter: 12.00 Auxiliary Elevation: 100.6 Top Of Dam: 102.7

[Use New Pipe Length]

This will return you to *Principal Routing* screen to run through the calculations with the new pipe length.

Ground Profile/Cross Section tab

WinPond - SAMPLE1.PRJ : Sample problem

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Design Check **Ground Profile/Cross Section** Embankment Cross Section Ground/Embankment Intersection Reports

Project Elevation-Storage Hydrology Sediment Principal Spillway Conduit Principal Routing Aux Spillway Aux Routing

Station Increment: 0 Height of instrument: 0 Percent ground slope: 0

NOTE: Negative distances are upstream of centerline.

NOTE: To change Height of instrument or Percent ground slope, double click an Elevation or Distance field.

Point Number

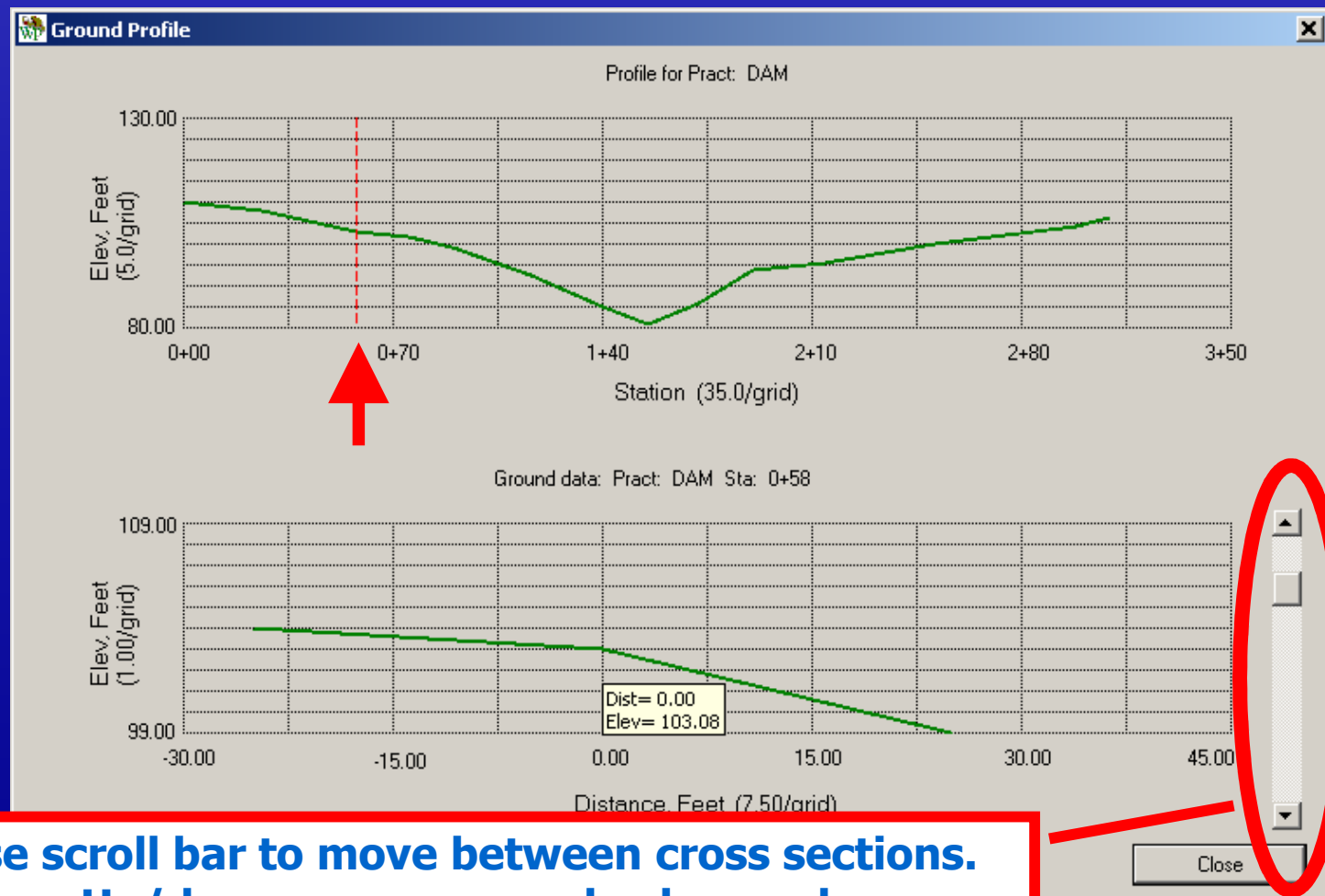
Station	Elevation	Distance
0+00	110.0	0.0
Delete		
0+26	108.0	0.0
Delete		
0+58	103.0	0.0
Delete		
0+75	101.5	0.0
Delete		
0+90	99.0	0.0
Delete		

Cross Section

[View](#) [Delete All](#)

Inlet Elevation: 98.0 Conduit Diameter: 12.00 Auxiliary Elevation: 100.6 Top Of Dam: 102.7

Ground Profile view



**Use scroll bar to move between cross sections.
Up/down arrows can also be used.**

Embankment Cross Section tab

WinPond - SAMPLE1.PRJ : Sample problem

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Design Check Ground Profile/Cross Section **Embankment Cross Section** Ground/Embankment Intersection Reports

Project Elevation-Storage Hydrology Sediment Principal Spillway Conduit Principal Routing Aux Spillway Aux Routing

Percent Settlement: 0.00

[View](#)

Template Number: 1

Station: 0+00

Settled top of fill elevation: 102.70

Top width (feet): 12.00

Upstream berm elevation:

Upstream berm width (feet):

Downstream berm elevation:

Downstream berm width (feet):

Front slope (n:1): 3.00

Back slope (n:1): 2.00

Stripping Depth (feet):

Core bottom width (feet):

Core depth (feet):

[Delete](#)

Add Template

Cubic Yards: Fill: 3,143 Settled Fill: 3,143 Strip: 0 Core: 0

Embankment Cross Section tab

WinPond - SAMPLE1.PRJ : Sample problem

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Design Check Ground Profile/Cross Section **Embankment Cross Section** Ground/Embankment Intersection Reports

Project Elevation-Storage Hydrology Sediment Principal Spillway Conduit Principal Routing Aux Spillway Aux Routing

Percent Settlement: 0.00 Add Template

[View](#)

Template Number: 1

Station: 0+00

Settled top of fill elevation: 105.00

Top width (feet): 12.00

Upstream berm elevation:

Upstream berm width (feet):

Downstream berm elevation:

Downstream berm width (feet):

Front slope (n:1): 3.00

Back slope (n:1): 2.00

Stripping Depth (feet):

Core bottom width (feet):

Core depth (feet):

[Delete](#)

Cubic Yards: Fill: 4,294 Settled Fill: 4,294 Strip: 0 Core: 0

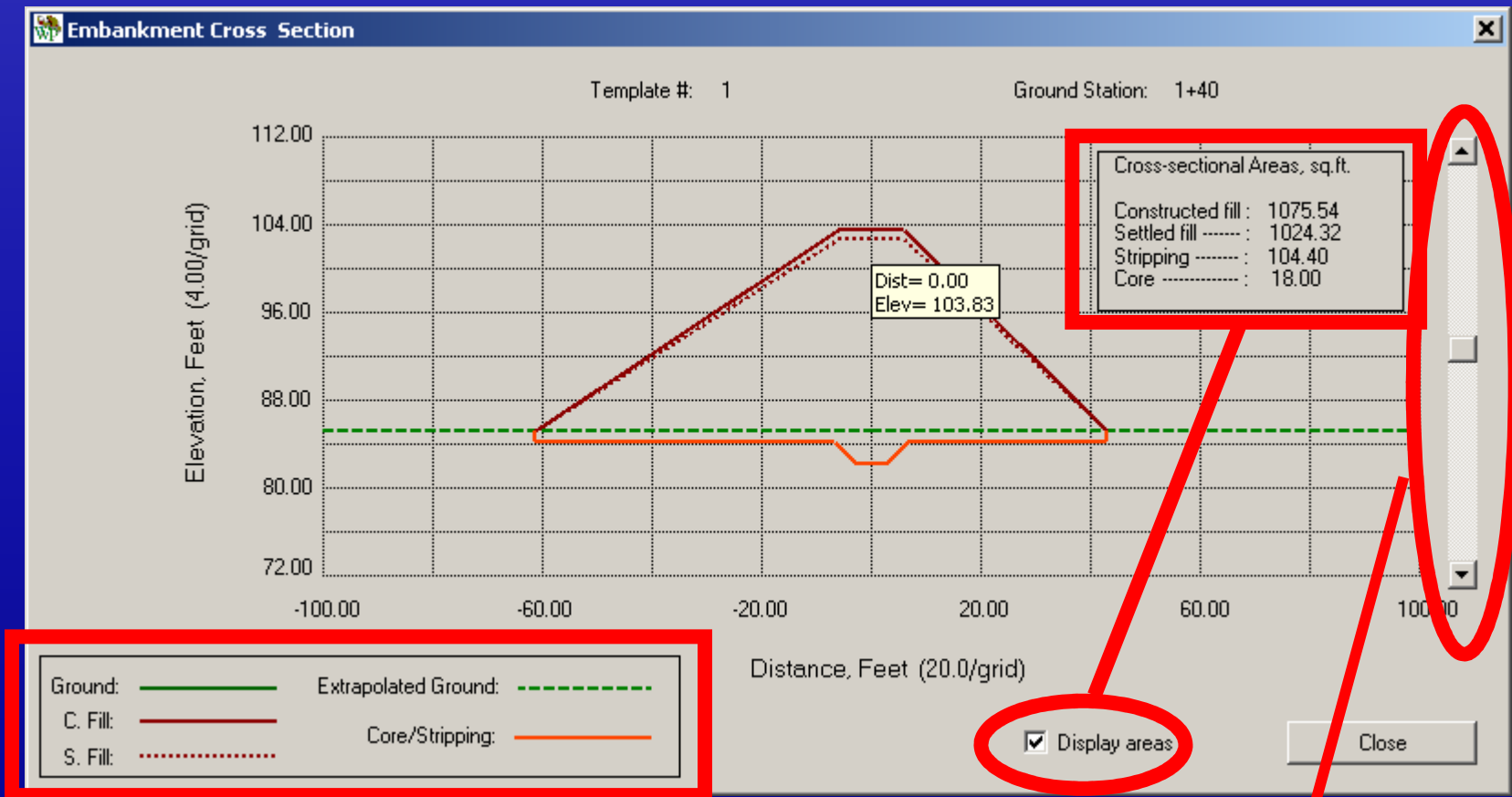
WinPond (#64)

Changing this value will cause WinPond to break the link between the principal routing/spillway template and the embankment template.

Do you want to permanently break the link for the Top of Dam?

Yes No

Embankment Cross Section view



**Use scroll bar to move between cross sections.
Up/down arrows can also be used.**

Ground/Embankment Intersection tab

WinPond - SAMPLE1.PRJ : Sample problem

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Design Check Ground Profile/Cross Section Embankment Cross Section **Ground/Embankment Intersection** Reports

Project Elevation-Storage Hydrology Sediment Principal Spillway Conduit Principal Routing Aux Spillway Aux Routing

The embankment centerline stations where the ground elevation is equal to the settled fill elevation and the auxiliary spillway elevation are shown below.

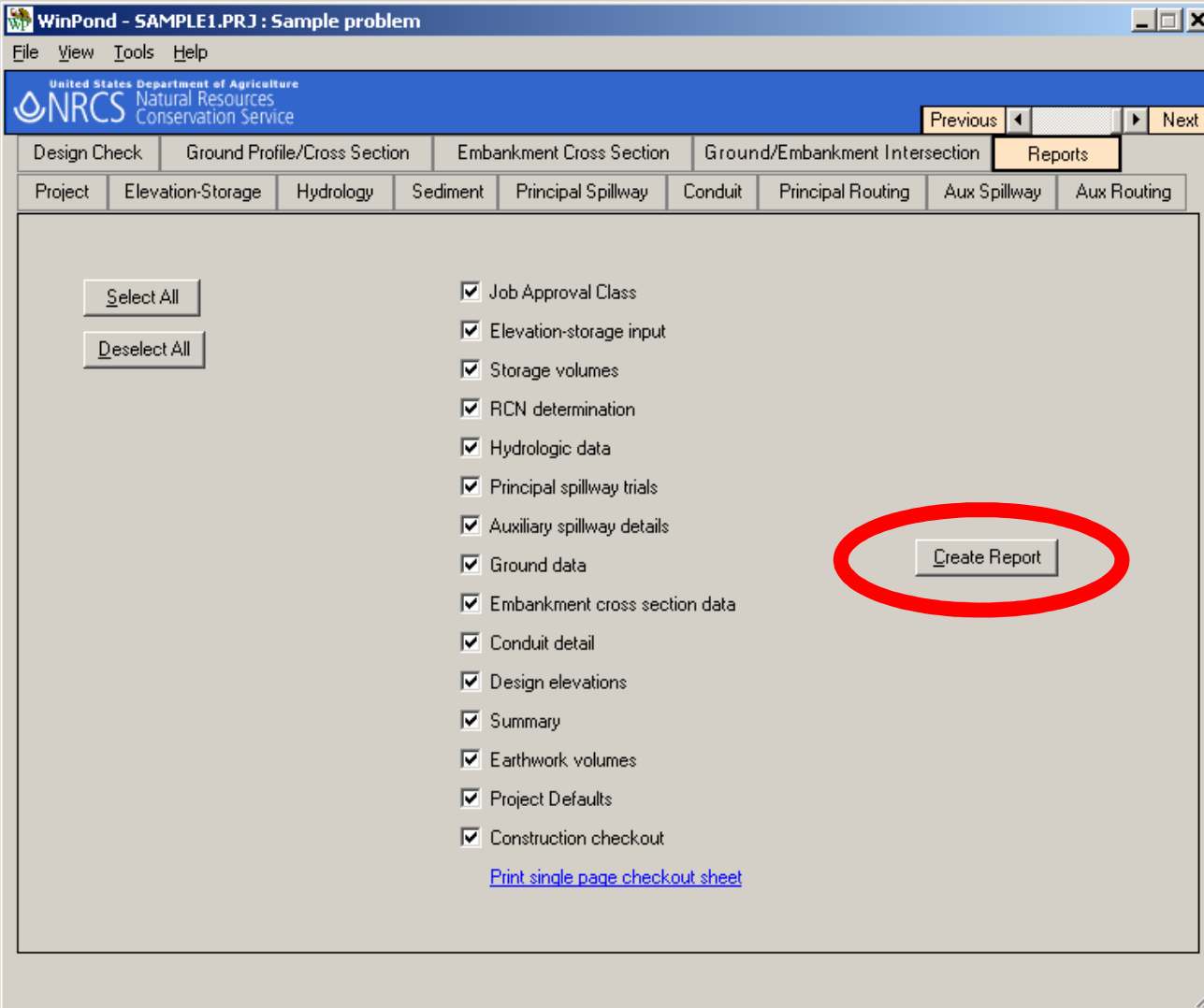
	----- LEFT -----	----- RIGHT -----
Settled fill	station: 0+59 elevation: 102.9	station: 2+84 elevation: 102.9
Auxiliary spillway	station: 0+80 elevation: 100.7	station: 2+57 elevation: 100.7

Auxiliary Spillway bottom width, in feet: 14.00

Enter dam centerline station where Auxiliary spillway centerline crosses:
(must be less than or equal to 0+73
or greater than or equal to 2+64)

0+65

Reports tab



WinPond - SAMPLE1.PRJ : Sample problem

File View Tools Help

United States Department of Agriculture
NRCS Natural Resources Conservation Service

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Design Check Ground Profile/Cross Section Embankment Cross Section Ground/Embankment Intersection **Reports**

Project Elevation-Storage Hydrology Sediment Principal Spillway Conduit Principal Routing Aux Spillway Aux Routing

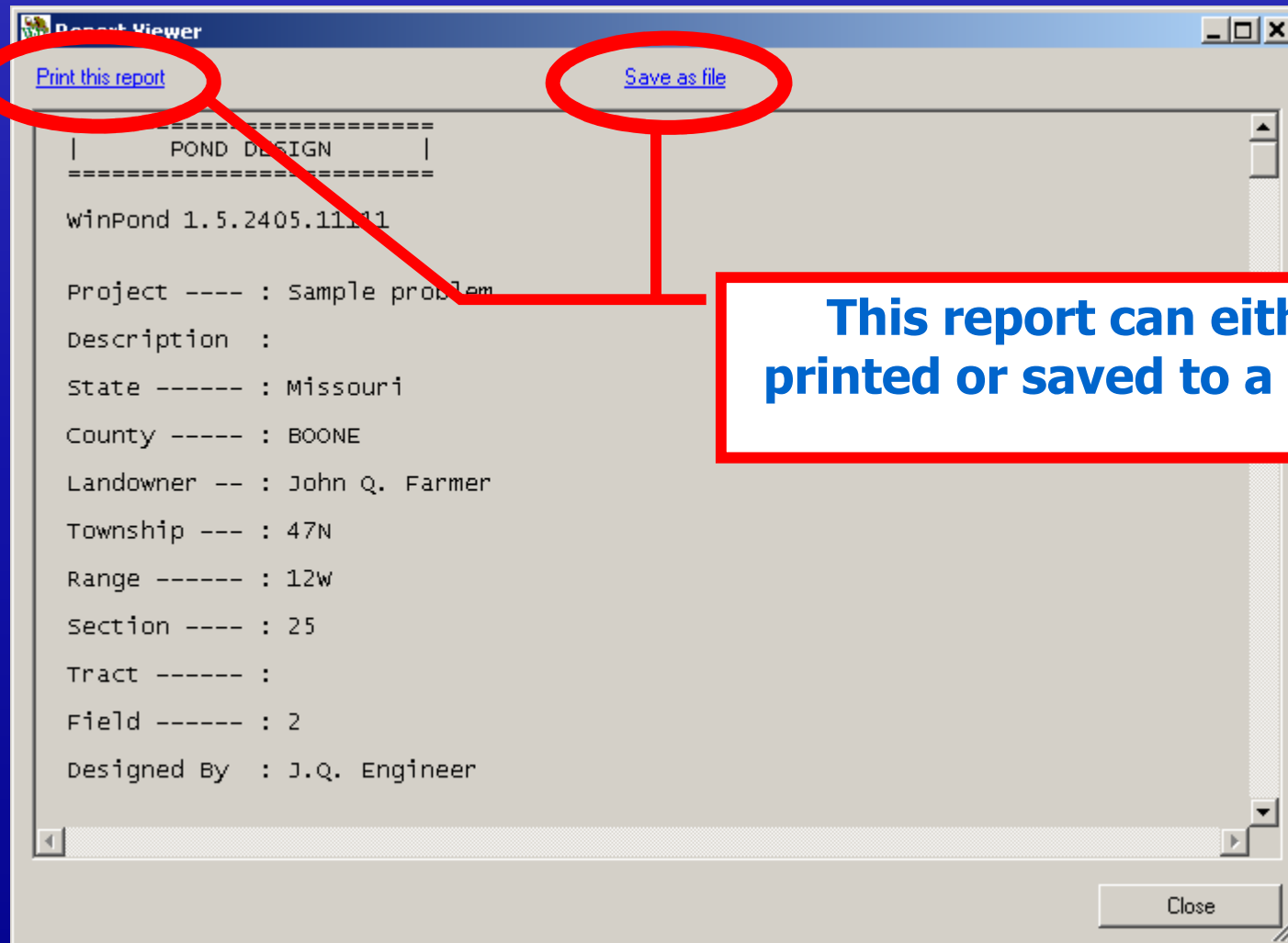
Select All
Deselect All

- ☒ Job Approval Class
- ☒ Elevation-storage input
- ☒ Storage volumes
- ☒ RCN determination
- ☒ Hydrologic data
- ☒ Principal spillway trials
- ☒ Auxiliary spillway details
- ☒ Ground data
- ☒ Embankment cross section data
- ☒ Conduit detail
- ☒ Design elevations
- ☒ Summary
- ☒ Earthwork volumes
- ☒ Project Defaults
- ☒ Construction checkout

[Print single page checkout sheet](#)

Create Report

Report Viewer



This report can either be printed or saved to a text file.

Example report showing Job Class & Inventory Size

**Inventory
Size**

**Engineering
Job Class**

***** JOB APPROVAL CLASS *****

Hazard Class	Low	A
Effective Height	Feet	19.5
Effective Storage	Ac-Ft	13.2
Overall Height	Feet	42.7
Total Storage	Ac-Ft	18.1
Storage X Effective Height	Ac-Ft Ft	258
Contributing Drainage Area	Acres	47
Contributing Drainage Area	Square Miles	0.07
Pipe Conduit Capacity	CFS	15.8
Open Channel Spillway Design Flow	CFS	52.0
Peak Inflow Aux Spillway Design Storm	CFS	139.2
Conduit Inside Diameter	Inches	12
Conduit Material	SSP	
Inlet Type	Canopy	
Job Approval Class		IV

INVENTORY SIZE DAM

***** SUMMARY *****

Inlet type: CANOPY Inlet Elevation: 98

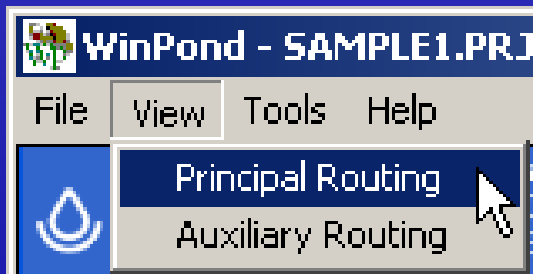
CONDUIT: Type	SSP	- Smooth Steel Pipe
Diameter, in.	12	
Length, lin. ft.	134	Extends 6 ft. beyond dnstr. toe
AUX. : Elevation	100.5	
Bottom width, ft.	14	
Hp, flow depth, ft.	1.17	
Exit slope, % min.	2	
max.	3	

Effective height, ft.	19.5	= AS elev. - low pt. on C/L
Height x storage	258	
Overall height, ft.	42.7	= Std. fill elev - chan. elev

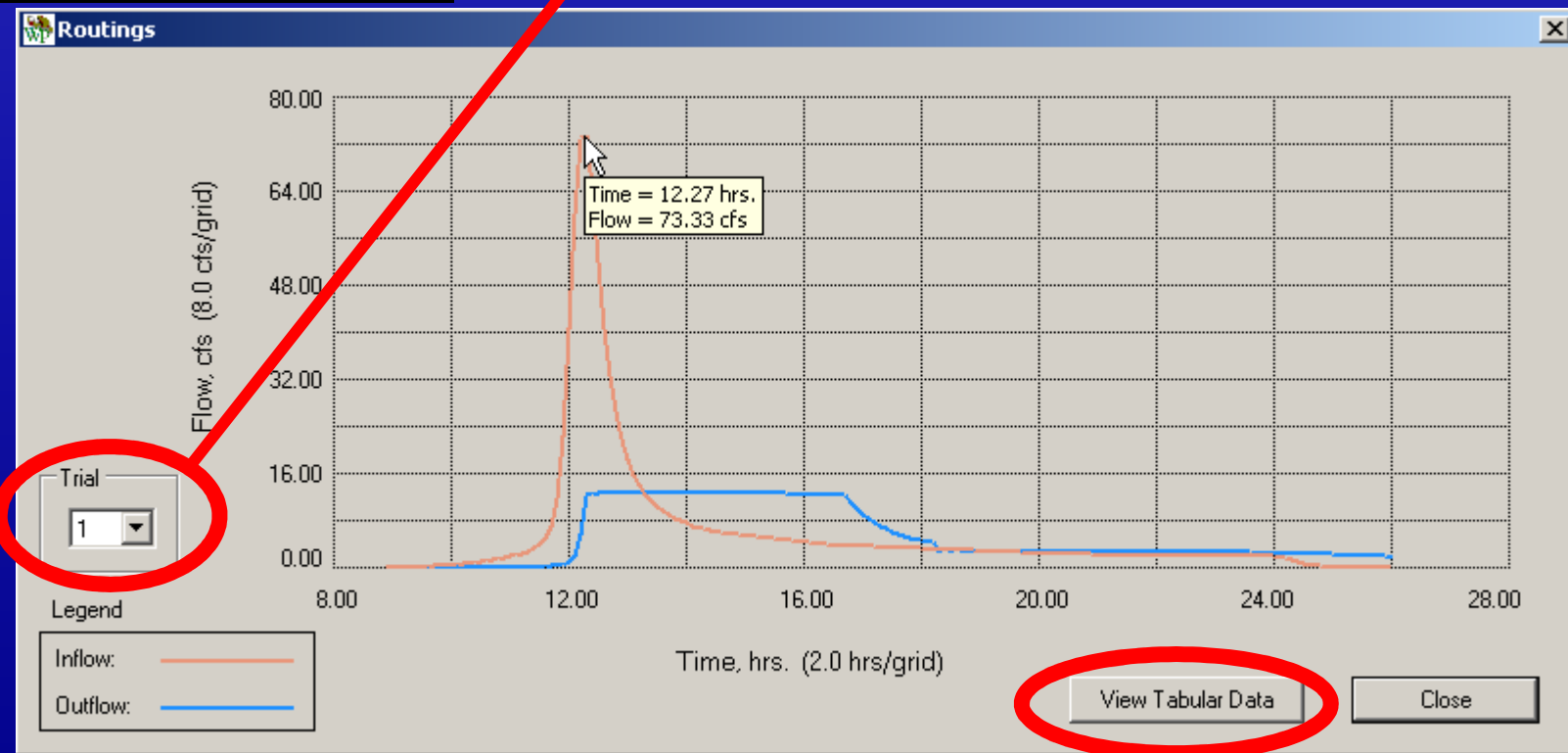
NOTE ***** INVENTORY SIZE DAM

NOTE ***** FILE PERMIT WITH STATE

Viewing Principal and Auxiliary Routings

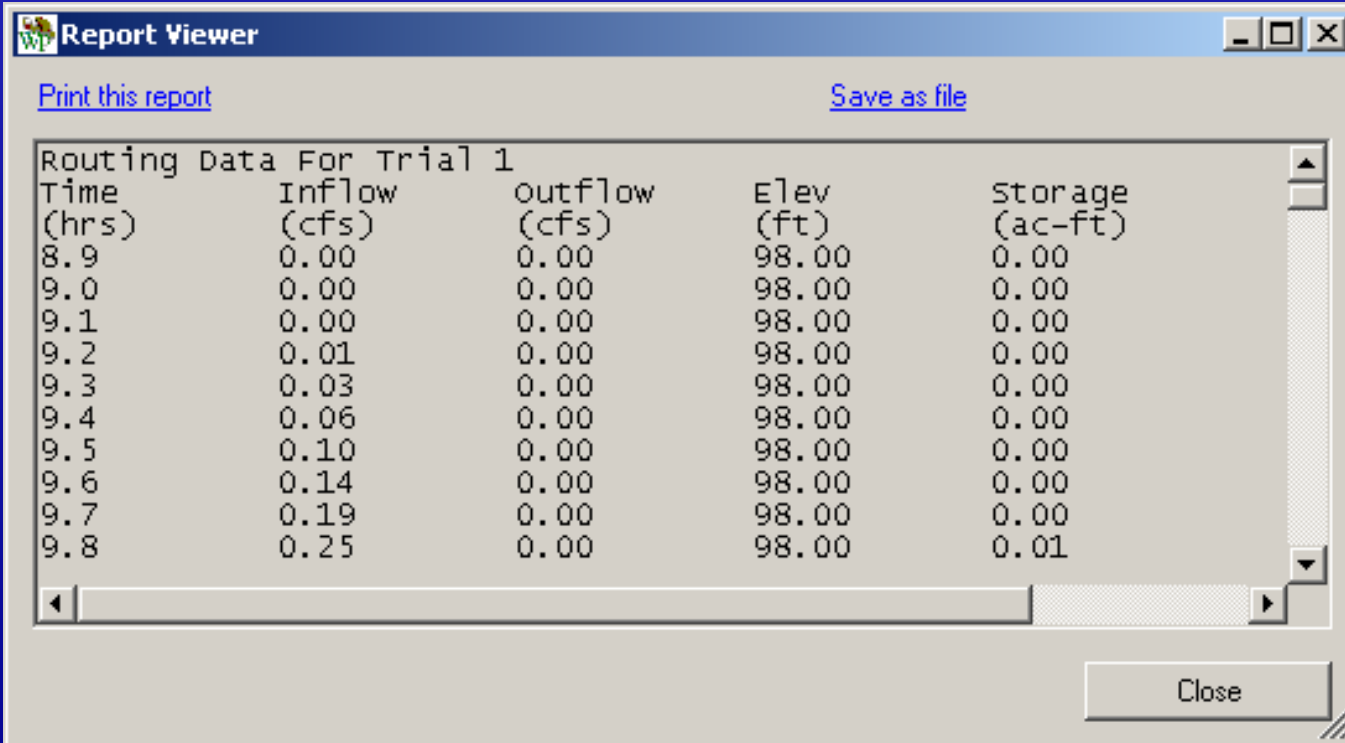


**On Principal Routing View,
change the Trial number to view
other trials (if applicable).**



Viewing Principal and Auxiliary Routings

Tabular Data

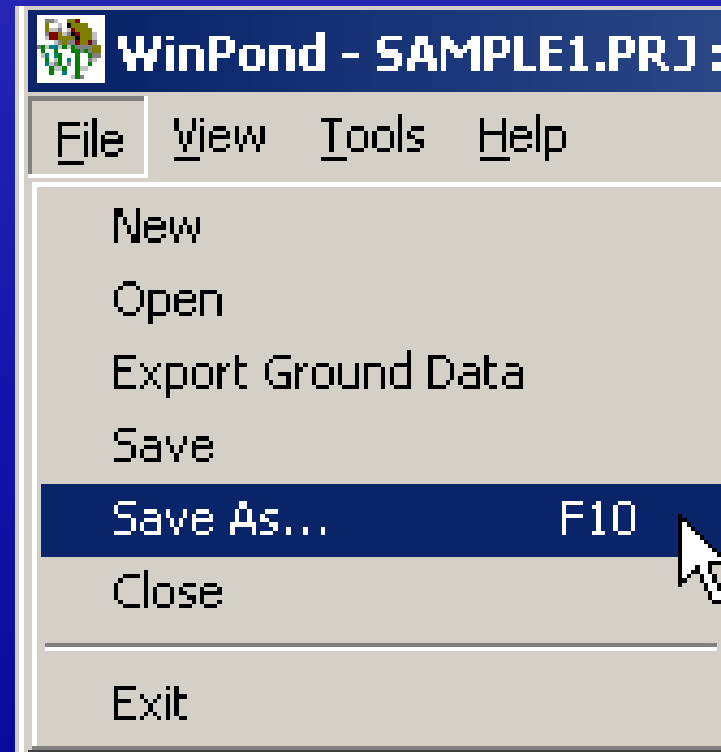


The screenshot shows a 'Report Viewer' window with a title bar containing a small icon and standard window controls. Below the title bar are two links: 'Print this report' and 'Save as file'. The main content area displays a table titled 'Routing Data For Trial 1'. The table has five columns: 'Time (hrs)', 'Inflow (cfs)', 'outflow (cfs)', 'Elev (ft)', and 'Storage (ac-ft)'. The data rows show time values from 8.9 to 9.8 hours. Inflow values increase from 0.00 to 0.25 cfs, while outflow remains at 0.00 cfs. Elevation is constant at 98.00 ft, and storage increases from 0.00 to 0.01 ac-ft. A 'Close' button is located at the bottom right of the window.

Time (hrs)	Inflow (cfs)	outflow (cfs)	Elev (ft)	Storage (ac-ft)
8.9	0.00	0.00	98.00	0.00
9.0	0.00	0.00	98.00	0.00
9.1	0.00	0.00	98.00	0.00
9.2	0.01	0.00	98.00	0.00
9.3	0.03	0.00	98.00	0.00
9.4	0.06	0.00	98.00	0.00
9.5	0.10	0.00	98.00	0.00
9.6	0.14	0.00	98.00	0.00
9.7	0.19	0.00	98.00	0.00
9.8	0.25	0.00	98.00	0.01

Saving your data

Select "File -> Save" or
"File -> Save As"
or press F10



Problems?

- WinPond Version 1.7 has fixed many of the “issues” found in previous versions
- A WinPond FAQ can be found at http://www.nrcs.usda.gov/wps/portal/nrcs/detail/mo/about/?cid=nrcs144p2_013015
- Any problems found in this new version will be placed here along with the problems that existed in version 1.7
- If you find any problems in version 1.7, use the link at the bottom of the FAQ page to report them.

Practice time

Review exercises

Questions?

THE END

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